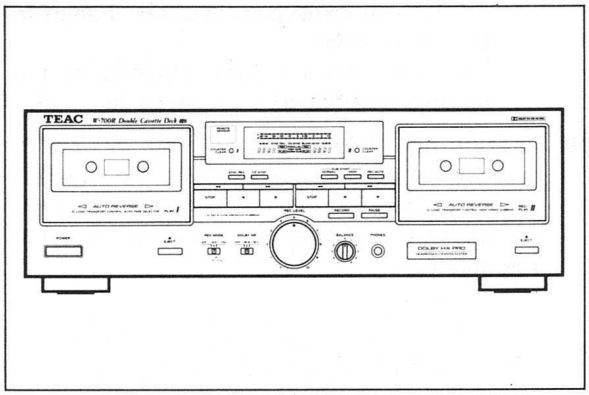
TEAC®

9101395601

W-700R

Double Auto Reverse Cassette Deck



OWNER'S MANUAL

Thanks for buying a TEAC.
Read this manual carefully to get the best performance from this unit.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

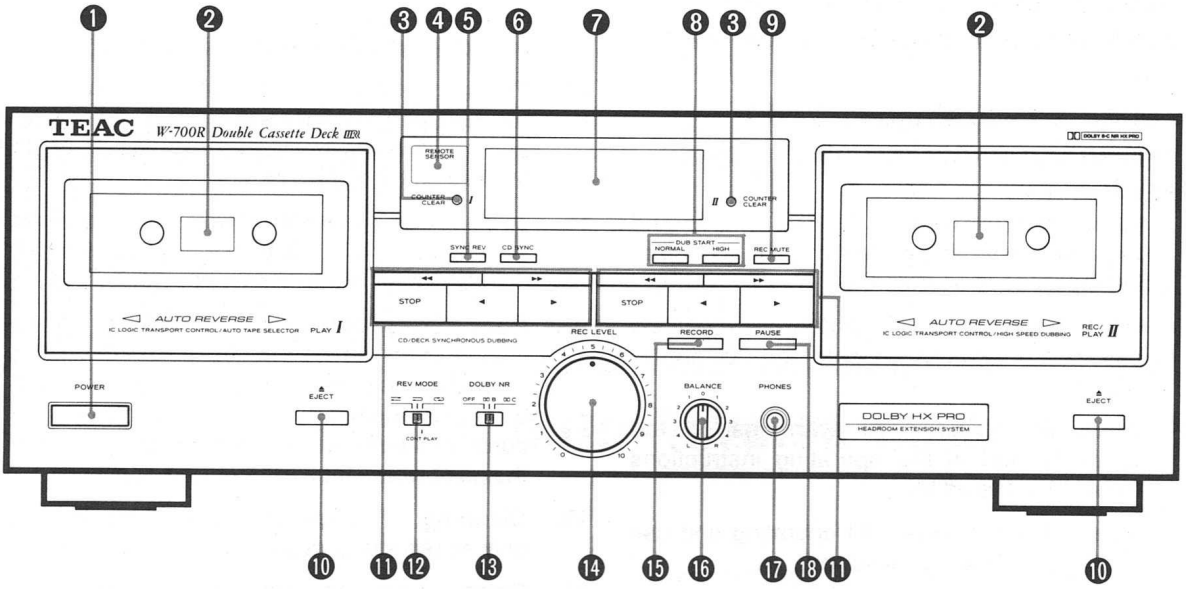
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

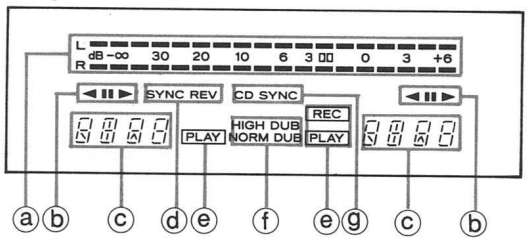
This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.
Model number _____
Serial number _____

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

FRONT PANEL



❶ POWER Switch
❷ Cassette Holder (TAPE I/TAPE II)
❸ COUNTER CLEAR Button (TAPE I/TAPE II)
❹ REMOTE SENSOR
(Infrared Signal Reception Window)
❺ SYNC REV (Reverse) Button
❻ CD SYNC Button
❼ Display Window
ⓐ Peak Level Meter
ⓑ Direction & Pause Indicators
ⓒ Multi Counter
ⓓ SYNC REV Indicator
ⓔ Mode Indicators
ⓕ Dubbing Indicators
ⓖ CD SYNC Indicator



❽ DUB (Dubbing) START Button
❾ REC (Record) MUTE Button (TAPE II only)
❿ EJECT Button (TAPE I/TAPE II)
⓫ Tape Operation Buttons (TAPE I/TAPE II)
◄◄ : Rewind
STOP
◄ : Reverse Play Button
► : Forward Play Button
►► : Fast Forward
⓬ REV (Reverse) MODE Switch
⓭ DOLBY NR Switch
⓮ REC (Record) LEVEL Control (TAPE II only)
⓯ RECORD Button (TAPE II only)
⓰ BALANCE Control (TAPE II only)
⓱ PHONES Jack
⓲ PAUSE Button (TAPE II only)

Note:
The remote control unit is not provided with the W-700R as accessory. By using the "UR" remote control unit provided with the TEAC receiver or amplifier, the W-700R mechanism (TAPE I/TAPE II) can be operated.

PRECAUTIONS

Environment

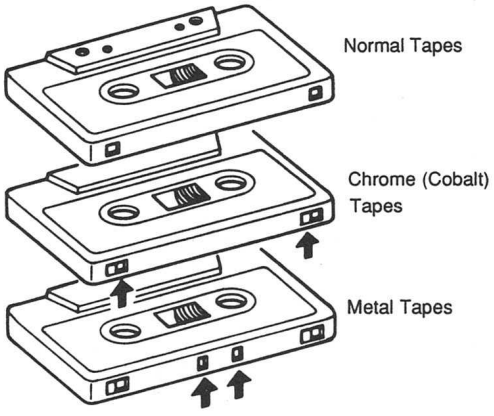
Avoid using the deck in the following conditions:

- At high temperatures (near a heater, exposed to direct sunlight, etc.).
- At extremely low temperatures.
- Where there is excessive humidity.
- In a dusty atmosphere.
- Where power line voltage fluctuations are severe (in which case the use of a voltage regulator may be advisable).

Cassette Tape

Tape Selection:

For the automatic tape select function to work properly, metal and chrome (cobalt) tapes must have identification holes.

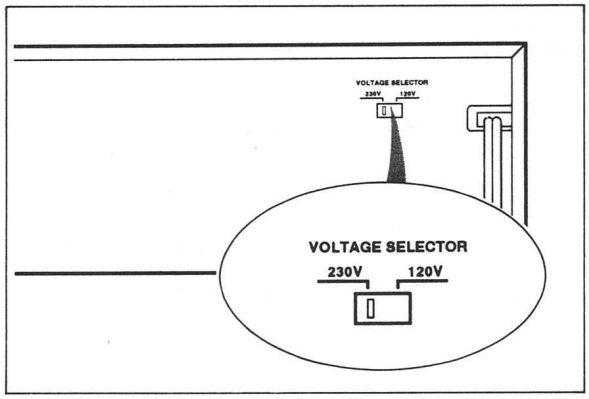


- Tape position identification holes.

Voltage Conversion
(General export models only)

Be sure to remove the power cord from the AC outlet before repositioning the voltage converter switch.

1. Locate the voltage selector on the rear panel.
2. Using a flat-bladed screwdriver, set to the appropriate 230 V or 120 V position according to your area.



Tape Handling:

Do not store tapes in the following places:

- On top of heaters, exposed to direct sunlight or in any other places with high temperatures.
- Near speakers, on TV sets or amplifiers or where they would be exposed to strong magnetic fields.
- Where humidity is high and in dirty, dusty places.
- Avoid dropping or subjecting cassettes to excessive shocks.
- As C-120 tapes are physically weak and could become entangled in the transport mechanism, do not use them.

IMPORTANT (for U.K. Customers)

The wires in this mains lead are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK. The wire which is coloured BROWN, must be connected to the terminal which is marked with the letter L or coloured RED.

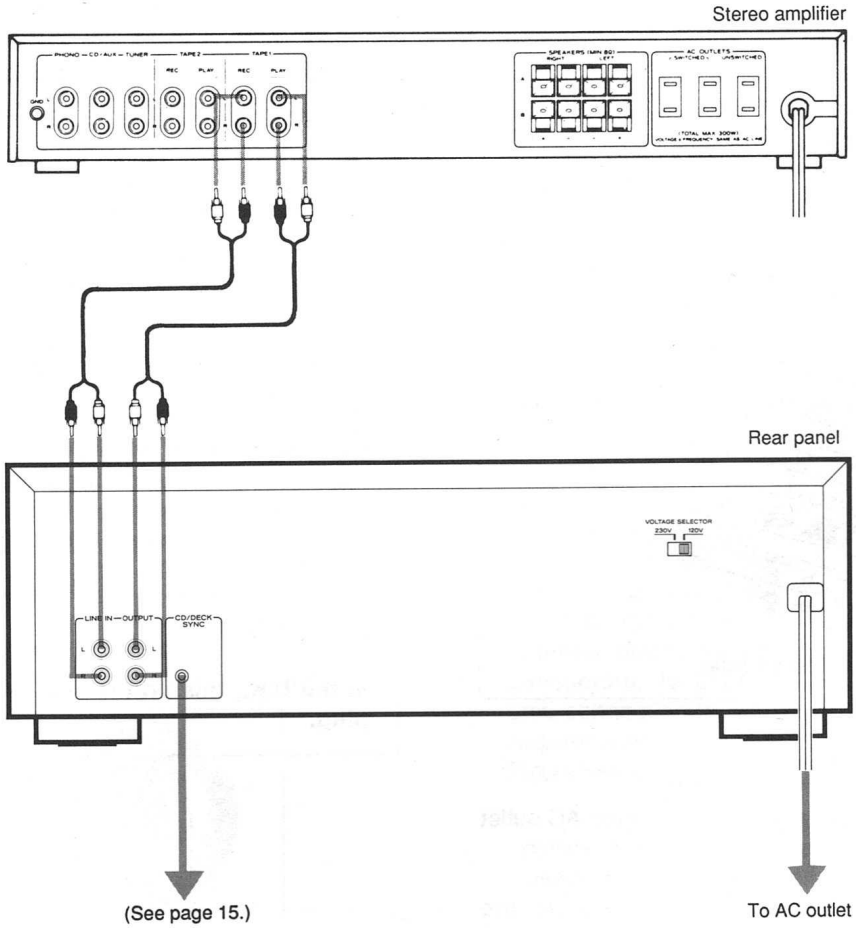
In the U.K., this unit is sold without an AC plug.

THE APPLIANCE CONFORMS WITH EEC DIRECTIVE 87/308/EEC REGARDING INTERFERENCE SUPPRESSION

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
"DOLBY", the double-D symbol ◻◻ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

CONNECTIONS

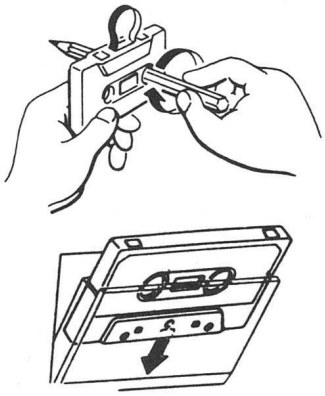
- Turn off the power switches of all equipment before making connections.
- Read the instructions of each component you intend to use with the deck.



OPERATIONS

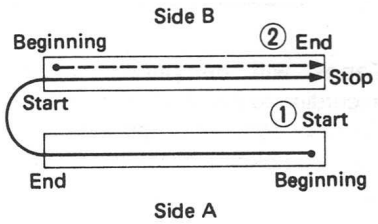
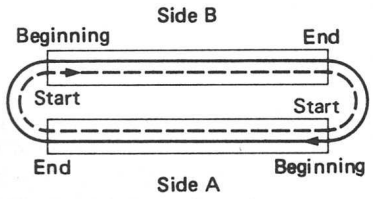
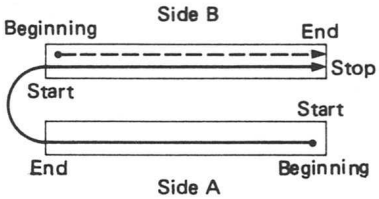
Loading a Cassette Tape

1 Use your finger or a pencil to turn the cassette's hub and take up any slack tape.
Note: Avoid touching the tape. Fingerprints attract dust and dirt.
2 Press the eject button (⏏)* to open the cassette compartment door.
3 Load the cassette tape with its open edge facing down.
4 Gently close the compartment door.



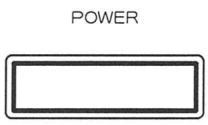
*** Notes:**
- The cassette holder cannot be opened during recording or playback.
- If the power has been switched off during play or recording, ejecting the cassette may be impossible. In such a case, switch the power on and press the eject button again.

Tape Travel Depending on Setting of REV MODE Switch

Setting	Tape Travel
⇄	 When the tape reaches the end, playback or recording is released.
⇉	 ① During forward play or recording, when the end of tape is reached, the direction of tape running is reversed to play or record in the opposite direction. Reverse play or recording will continue to the end of the other side, at which point play or recording is released. ② During reverse play or recording, when the tape reaches the end, play or recording is released.
⇆	**PLAY mode (Tapes loaded in TAPE I or II)**  During either forward or reverse play, when the end of tape is reached, the direction of tape running is reversed and play continues in the opposite direction. In this way, the two sides of the tape are played back continuously; the tape will stop after 5 cycles.
	PLAY mode (Tapes loaded in TAPE I and II) — **CONT PLAY (Continuous Playback)** — Refer to "Continuous Playback Operation" chart on page 9.
	RECORD mode (TAPE II only)  • Operation is same as ⇉ .

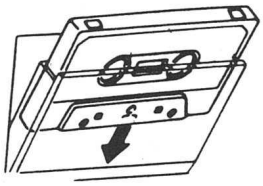
Playback with TAPE I or TAPE II

1. Press the POWER switch to ON.

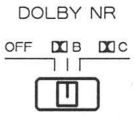


2. Set the REV MODE switch to the required tape travel mode, referring to the chart "Tape Travel Depending on Setting of REV MODE Switch" on page 7.

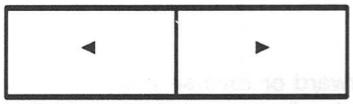
3. Load a pre-recorded cassette in TAPE I or II.



4. Select the appropriate DOLBY NR system.



5. Press the ◄ or ► button for TAPE I or II to start playback.

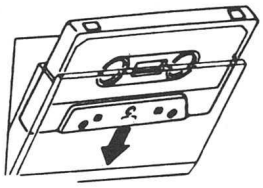


6. Adjust the volume with the amplifier's volume control.

- To stop playback, press the STOP button.

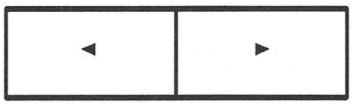
Continuous Playback

1. Load pre-recorded cassettes in TAPE I and TAPE II.



2. Set the necessary controls and switches but not the ◄ or ► button, referring to "Playback with TAPE I or TAPE II" on the left.
3. Set the REV MODE switch to the CONT PLAY (⊂⊃) position.

4. Press the ◄ or ► button of the deck to be played back first.



5. Tapes will be played back continuously, according to the chart on page 9.

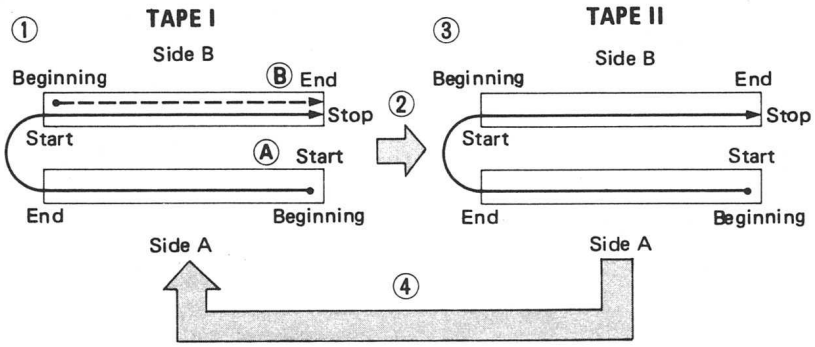
- To stop continuous play before 5 cycles have been completed, press the STOP button of either deck.

Multi-Counter

Tape Counter Mode

In this mode, the counter functions as a conventional tape counter, counting up when the tape is moving forward and down when the tape is being rewound. The display can be cleared by pressing the COUNTER CLEAR button, which resets the counter index to "0000".

Continuous Playback Operation



① Ⓐ When playback starts in the forward direction, at the end of tape, the tape is reversed to play the other side. At the end of this side, playback is released.

Ⓑ When playback starts in the reverse direction, at the end of tape, TAPE I is released.

② Control is transferred to TAPE II.

③ Playback starts in the forward direction; at the end of tape, it is reversed and the other side is played back.

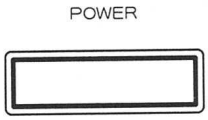
④ At the end of tape, control is transferred back to TAPE I, which plays both sides.

This sequence ① - ④ is repeated for 5 cycles.

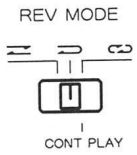
Recording with TAPE II

Recording from a stereo system:

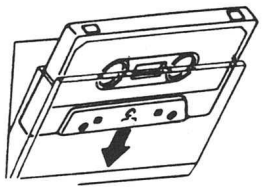
1. Press the POWER switch to ON.



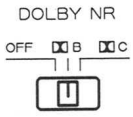
2. If you want to make a bi-directional recording, set the REV MODE switch to the ⇄ position.



3. Load a recordable cassette in TAPE II.
- Check that the safety tabs on the spine of the cassette are in place. If they have been broken off, block the holes with adhesive tape.

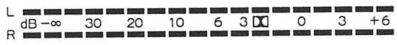


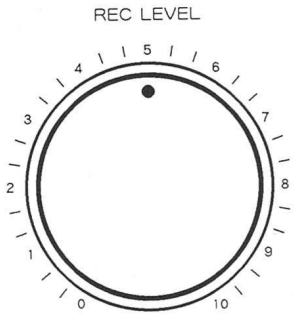
4. Select the desired DOLBY NR system.



5. Press the RECORD button and the deck enters the record-pause mode (the REC indicator lights).

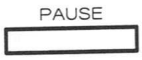
6. Adjust the recording level with the REC LEVEL control so that the loudest sound to be recorded just makes the meters briefly reach around the "0 dB" point (for Normal or Chrome tapes) or the "+3 dB" point (for Metal tapes).





7. To adjust the balance of the input signal, use the BALANCE control.

8. Press the PAUSE button again to start recording.
- To stop recording temporarily, press the PAUSE button. To restart the tape, press it again.
- To stop recording, press the STOP button.



Erasing

Anything previously recorded on the tape will automatically be erased when you make a new recording on it. It can also be erased by "recording" on it with the REC LEVEL control set to "0".

Record Muting Operation

- **Automatic spacing operation for 4-second blanks (during recording)**
  Press the REC MUTE button during recording. The tape movement continues and a blank space of about 4 seconds is recorded (the RECORD indicator blinks). The deck then enters the record-pause mode automatically (both the RECORD and PAUSE indicators light).
  To restart recording, press the PAUSE button (the PAUSE indicator goes off).
- **Automatic spacing operation for 4-second blanks (during record-pause)**
  In the record-pause mode, pressing the REC MUTE button will initiate the above record-muting operation automatically. The deck then returns to the record-pause mode.
- **For a blank of more than 4 seconds**
  During recording, hold the REC MUTE button depressed for longer than 4 seconds. A blank space will be left as long as the button is pressed. Release the button to enter the record-pause mode. To restart recording, press the PAUSE button.
- **For a blank of less than 4 seconds**
  After pressing the REC MUTE button during recording, press the PAUSE button before 4 seconds has elapsed. The deck will stop and enter the record-pause mode at the point at which the PAUSE button is pressed. To restart recording, press the PAUSE button again.

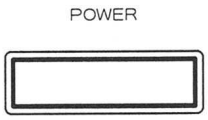
Note:

- During record muting operation (while the RECORD indicator is blinking), pressing the REC MUTE button again will release the record muting operation and recording will restart without stopping the tape.

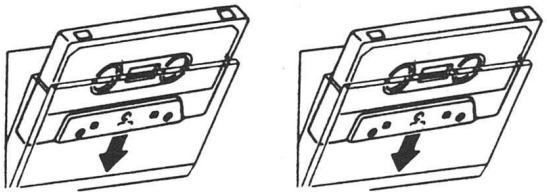
Dubbing (Copying from TAPE I to TAPE II)

To dub the entire recorded section of a pre-recorded cassette

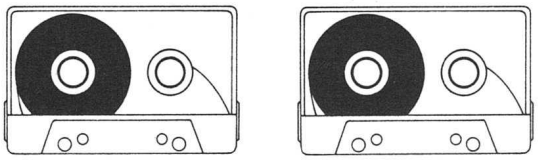
1. Press the POWER switch to ON.



2. Load the pre-recorded cassette into TAPE I and a recordable cassette into TAPE II.



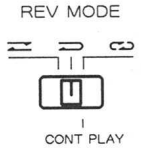
3. Fully rewind both cassettes so their tapes are taken up on their left reels.



4. Set the REV MODE switch to the desired position.

   ⇄ : Dubbing will be performed for one side only.

   ⇉ : Dubbing will be stopped after both sides have been dubbed.



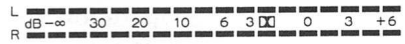
5. Set both decks to the ► direction.

6. Press the DUB START HIGH or NORMAL button to start dubbing. The indicator corresponding to the button pressed will light.

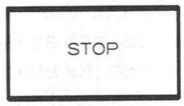
   NORMAL: Dubbing is performed at normal speed.

   HIGH: Dubbing is performed at twice normal speed.

7. The peak level meter indicates the TAPE I signal levels; the recording levels of TAPE II will be set automatically (at the same levels as TAPE I).



8. After dubbing is completed, both decks stop automatically, according to the setting of the REV MODE button.
9. To stop dubbing, press either of the STOP buttons.



Notes:

- The settings of the REC LEVEL control and DOLBY NR switch are ignored during dubbing as they have no effect.
- The ◄◄, ◄ , ► and ►► buttons do not function during NORMAL speed or HIGH speed dubbing. Also, REC MUTE and PAUSE do not function during HIGH speed dubbing.
- The sound quality of the dubbed tape may be slightly worse than that of the original tape. For this reason, multigeneration dubbing is not recommended.
- If there is a TV set near the W-700R during high speed dubbing, it is possible that the TV's horizontal scanning frequency (15.75 kHz) may be recorded on the tape. If this occurs or to prevent it in advance, dub at normal speed, switch off the television or keep the deck a reasonable distance away from the TV.

Synchro reverse dubbing

The SYNC REV button allows both decks to be reversed at exactly the same time during dubbing. This function is convenient when using tapes with different lengths, to dub a tape with exactly the same contents as the original.

1. Set the tape running direction of both decks to the ► (forward) direction, and set the REV MODE switch to the ⇄ position.

2. Press the SYNC REV button.

3. Press either of DUB START buttons (HIGH or NORMAL).

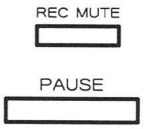
4. The tapes in TAPE I and II travel as illustrated in the chart "Synchro Reverse Dubbing Operation" on page 14.

Notes:

- If the original tape is shorter than the dubbed tape, blank sections will be left at both ends of the dubbed tape. To prevent this, use tapes with the same length as far as possible.
- Synchro Reverse Dubbing mode can be entered only when the REV MODE switch is in the ⇄ position and the direction indicators of both TAPE I and TAPE II are ►.

Manual editing with REC MUTE and PAUSE

During normal-speed dubbing, you can edit the dubbed tape as required using the REC MUTE and PAUSE buttons. For example, you can record only the required tunes from TAPE I to TAPE II skipping unwanted tunes.



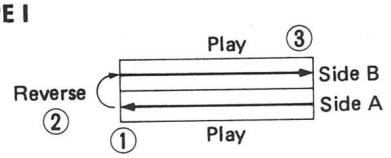
- During normal-speed dubbing, when the PAUSE button is pressed, TAPE II enters the record-pause mode while TAPE I continues playback. While listening to the sound from TAPE I, when it reaches a section you want to dub, press the PAUSE button again to restart recording on TAPE II.
- During normal-speed dubbing, when the REC MUTE button is pressed, TAPE II enters the record muting operation as in normal recording. To restart recording on TAPE II, press the PAUSE button.

CAUTION:
Recording pre-recorded tapes, records, or other published or broadcast material may infringe copyright laws. Check before recording.

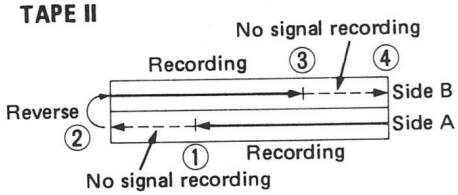
Synchro Reverse Dubbing Operation

TAPE I tape shorter than TAPE II

TAPE I



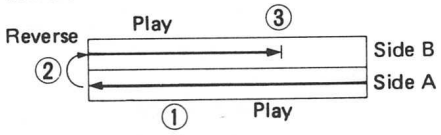
TAPE II



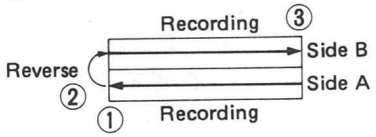
① When TAPE I reaches the end of the forward side, TAPE I stops and TAPE II enters the "no signal recording" mode.
② When TAPE II reaches the end, both TAPE I and II are reversed simultaneously then TAPE I resumes reverse play and TAPE II resumes recording.
③ When TAPE I reaches the end of the reverse side, TAPE I stops and TAPE II enters the "no signal recording" mode.
④ When TAPE II reaches the end, the deck stops.

TAPE I tape longer than TAPE II

TAPE I



TAPE II

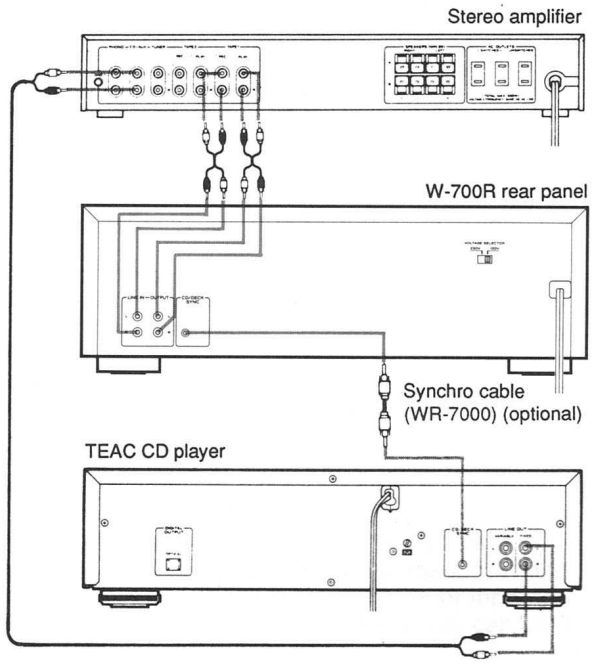


① When TAPE II reaches the end of forward side, TAPE II enters the record-pause mode for the reverse side, while TAPE I continues playback.
② When TAPE I reaches the end, TAPE I and II start reverse play and recording simultaneously.
③ When TAPE II reaches the end of the reverse side, both TAPE I and II stop simultaneously.

CD Synchro Dubbing

By connecting the deck to a TEAC CD synchro compatible CD player which has a CD/DECK SYNC terminal on its rear panel, dubbing (recording) synchronized with the CD player is possible.

1. Connect the deck's CD/DECK SYNC terminal to the CD player's CD/DECK SYNC terminal using an optional cable (WR-7000) as illustrated below.



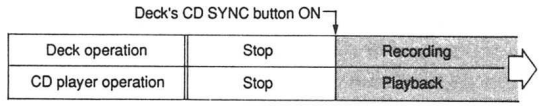
2. Perform programming of the "time edit", etc. functions of the CD player beforehand (refer to the instructions of the CD player).
3. Set the source to CD using the amplifier's source select buttons.
4. Set the recording level as explained in step 6, of "Recording with TAPE II" on page 10.

5. Set the deck and the CD player to the stop mode.
6. Press the CD SYNC button of the deck.

The CD player will start automatically approx. 1 sec after the deck starts recording and dubbing will be performed. (The CD SYNC indicator lights.)

Start of CD synchro dubbing

The shaded portions (▭) indicate the CD synchro dubbing mode in the following.

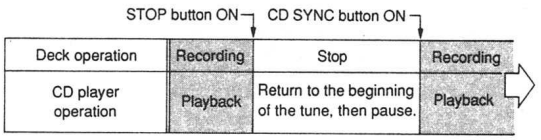


To stop temporarily during dubbing:

To temporarily stop CD synchro dubbing

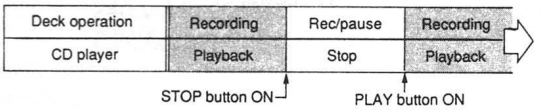
(A) Press the STOP button of the deck. The CD player will return to the beginning of the current tune and pause there. To restart, press the deck's CD SYNC button.

(A: Operation of the deck)



(B) Press the stop button of the CD player. The deck enters the rec/pause mode. To restart, press the CD player's play button.

(B: Operation at the CD player)



* When the CD player has entered the pause mode, it stands by after returning to the beginning of the tune that has just been played.

* When recording is done up to the end of the tape, the CD player stands by after returning to the beginning of the tune that has just been played.

Note

If the CD player is connected to the stereo amplifier using an optical cable, synchro dubbing is not possible. If synchro dubbing is required, you must connect the deck's analog output using pin plug cords.

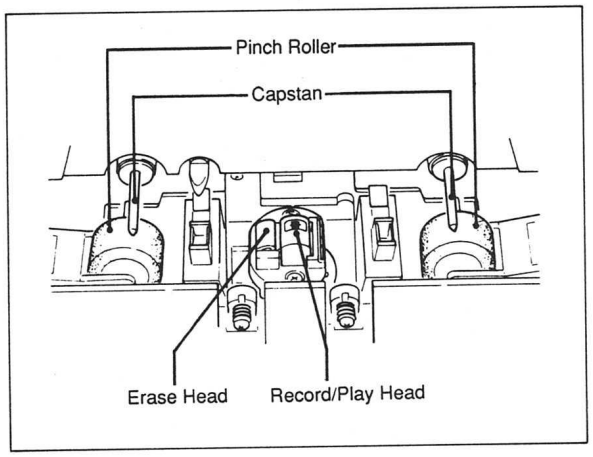
MAINTENANCE

The heads and tape path should be cleaned and demagnetized periodically.

Cleaning Tape Path

- Apply head cleaning fluid* to a cotton bud or soft cloth, and lightly rub the heads, capstan and all metal parts in the tape path.
- Also clean the pinch roller using rubber cleaning fluid*.

* Both are available in TEAC Tape Recorder Cleaning Kits HC-2 and RC-2 in the U.S.A. or TZ-261 in other areas.



Demagnetizing Heads

Be sure that the power is off, then demagnetize the heads using a TEAC E-3 demagnetizer. For details of its use, read its instructions.

TROUBLESHOOTING

Basic troubleshooting of a cassette tape deck is similar to troubleshooting any other electrical or electronic equipment. Always check the most obvious possible causes first. To give you a few ideas of what to look for, check the following:

- No power: Is the power cord connected?
- No audio output: Have all connections been made correctly?
- Low sound quality: Are the heads dirty or magnetized? Are you using good quality tape? Has the correct NR System been selected?
- Impossible to enter the record mode: Are the record protection tabs of the cassette in place?

DOLBY HX PRO

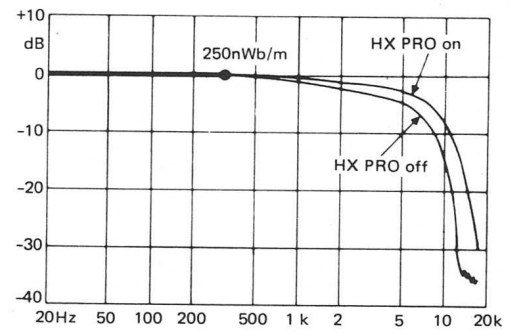
Dolby HX Pro is an "active bias" technique that can improve the quality of audio tape recordings. High-level high frequencies can be recorded more accurately, without sacrificing the signal-to-noise ratio, while such side effects of tape saturation as distortion are reduced.

What Is Bias?
Bias is a very high-frequency signal generated within a tape deck and recorded on the tape simultaneously with the program material. This inaudible signal allows low noise, low distortion recording and a flat frequency response. Different magnetic tape formulations require differeent amounts of bias for optimum performance. If the bias level is too high, the high-frequency Maximum Output Level (MOL) decreases.

The Problem of Self-Bias
Unfortunately, the bias level is often influenced by the signal being recorded. The high frequency components of some music act as bias. This unpredictable source of bias is added to the existing bias, resulting in a loss of high-frequency response. As the high-frequency contents of the signal increase, the ability of the recorder to record high frequencies (MOL) decreases. This phenomenon is called self-biasing.

The Dolby HX Pro Solution
Dolby HX Pro monitors the high-frequency contents of the program and adjusts the recorder's bias oscillator to maintain a constant total bias level. The result is improved high-frequency response and lower distortion. Depending on the type of tape, the improvement in headroom (dynamic range) can be 6 dB or more.

The Benefits
With Dolby HX Pro, it is easier to make more accurate recordings of music which contains high-level high frequency components. The improvement is similar to that of high-performance tape over conventional tape, and regardless of the type of tape used, the results will sound better.
Most important of all, Dolby HX Pro requires no decoding process. Once a tape is recorded with it, the improvement will be realized when playing the tape back on any machine.



Example of improved frequency response using Dolby HX Pro function

SPECIFICATIONS

Track System : 4-Track, 2-Channel Stereo
Heads : 3; Deck I; 1 Playback (rotating)
Deck II; 1 Erase and 1 Record/Playback (rotating)
Type of Tape : Cassette tape C-60 and C-90 (Philips type)
Tape Speed :
4.76 cm/sec (1-7/8 ips), 9.5 cm/sec (3-3/4 ips) (In Hi-Speed Dub)
Motors : 2 DC Servo Motors (1 ea. Deck)
Wow and Flutter (WRMS) : 0.06 %
Frequency Response (Overall, -20 dB) :
25 - 19,000 Hz, Metal tape
25 - 18,000 Hz, CrO_2 tape
25 - 17,000 Hz, Normal tape
Signal-to-Noise Ratio (Overall) :
59 dB (NR off, 3% THD level, Weighted)
69 dB (Dolby B NR on, over 5 kHz)
79 dB (Dolby C NR on, over 1 kHz)
Fast Winding Time :
Approximately 110 seconds for C-60
Input : Line; 97 mV, 50 k ohms
Output : Line; 0.52 V for load impedance of 50 k ohms or more
Headphones; 8 ohms
Power Requirements :
120/230 V AC, 50/60 Hz
(General Export Model)
120 V AC, 60 Hz
(U.S.A./Canada Model)
230 V AC, 50 Hz
(Europe Model)
240 V AC, 50 Hz
(UK/Australia Model)
Power Consumption : 14 W
Dimensions (W x H x D) :
435 x 144 x 284 mm
(17-1/8" x 5-11/16" x 11-3/16")
Weight (net) : 4.6 kg (10-1/8 lbs.)
Standard Accessories:
Input-output connection cords

- Specifications were determined using metal tape except as noted.
- Improvements may result in specification or feature changing without notice.

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